

-continued

<400> SEQUENCE: 56

His His His His His His
1 5

<210> SEQ ID NO 57

<211> LENGTH: 15

<212> TYPE: PRT

<213> ORGANISM: Artificial Sequence

<220> FEATURE:

<223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic peptide

<400> SEQUENCE: 57

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

We claim:

1. A human or humanized monoclonal anti-CGRP antagonist antibody that (1) binds human α -CGRP and (2) inhibits cyclic adenosine monophosphate (cAMP) activation in cells.

2. The anti-CGRP antagonist antibody according to claim 1, wherein the anti-CGRP antagonist antibody binds the C-terminal fragment having amino acids 25-37 of human α -CGRP.

3. The anti-CGRP antagonist antibody according to claim 1, wherein the anti-CGRP antagonist antibody binds a C-terminal epitope within amino acids 25-37 of human α -CGRP.

4. The anti-CGRP antagonist antibody according to claim 3, wherein the anti-CGRP antagonist antibody binds the C-terminal fragment having amino acids 33-37 of human α -CGRP.

5. The anti-CGRP antagonist antibody of claim 4, wherein the anti-CGRP antagonist antibody binds a C-terminal epitope within amino acids 33-37 of human α -CGRP.

6. The anti-CGRP antagonist antibody according to claim 1, wherein the anti-CGRP antagonist antibody binds the C-terminal fragment having amino acids G33 and/or F37 of human α -CGRP.

7. The anti-CGRP antagonist antibody according to claim 1, wherein the anti-CGRP antagonist antibody is: (a) an antibody having a CDR H1 as set forth in SEQ ID NO: 3; a CDR H2 as set forth in SEQ ID NO: 4; a CDR H3 as set forth in SEQ ID NO: 5; a CDR L1 as set forth in SEQ ID NO: 6; a CDR L2 as set forth in SEQ ID NO: 7; and a CDR L3 as set forth in SEQ ID NO: 8; or (b) a variant of an antibody of (a) as shown in Table 6.

8. The anti-CGRP antagonist antibody according to claim 1, wherein the anti-CGRP antagonist antibody comprises a V_H domain that is at least 90% identical in amino acid sequence to SEQ ID NO: 1 and a V_L domain that is at least 90% identical in amino acid sequence to SEQ ID NO: 2.

9. The anti-CGRP antagonist antibody according to claim 8, wherein the amino acid residue at position 99 of SEQ ID NO: 1 is L or is substituted by A, N, S, T, V or R, and wherein

the amino acid residue at position 100 of SEQ ID NO: 1 is A, or is substituted by L, R, S, V, Y, C, G, T, K or P.

10. The anti-CGRP antagonist antibody according to claim 1, wherein the anti-CGRP antagonist antibody comprises a V_H domain comprising SEQ ID NO: 1 and a V_L domain comprising SEQ ID NO: 2.

11. The anti-CGRP antagonist antibody according to claim 1, wherein the anti-CGRP antagonist antibody comprises a heavy chain produced by the expression vector with ATCC Accession No. PTA-6867.

12. The anti-CGRP antagonist antibody according to claim 1, wherein the anti-CGRP antagonist antibody comprises a light chain produced by the expression vector with ATCC Accession No. PTA-6866.

13. The anti-CGRP antagonist antibody according to claim 1, consisting of a heavy chain sequence of SEQ ID NO: 11 and a light chain sequence of SEQ ID NO: 12.

14. The anti-CGRP antagonist antibody according to claim 1, wherein the anti-CGRP antagonist antibody comprises a heavy chain constant region derived from a human IgG2 constant region.

15. The anti-CGRP antagonist antibody according to claim 1, wherein the anti-CGRP antagonist antibody comprises an Fc region.

16. The anti-CGRP antagonist antibody according to claim 15, wherein the Fc region comprises an impaired effector function.

17. The anti-CGRP antagonist antibody according claim 1, wherein the antibody is a humanized antibody.

18. The anti-CGRP antagonist antibody of claim 1, wherein the cells are SK-N-MC cells.

19. A pharmaceutical composition comprising the anti-CGRP antagonist antibody of claim 1 and a pharmaceutically acceptable excipient.

* * * * *